This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A process for the production of electricity in a fuel cell from hydrocarbons, comprising a partial oxygenation stage of hydrocarbons, said process comprising

a) providing a stream (2) ~~(1)~~ containing a hydrocarbon feedstock having a boiling point ~~points~~ less than about 400°C,

b) preheating said stream to a temperature of at least 200°C, so that said stream is entirely evaporated to form a hydrocarbon gaseous stream,

c) preheating an air-carrying gaseous oxidant stream (1) ~~(2)~~ to a temperature of at least 400°C,

d) reacting the hydrocarbon gaseous stream with the preheated air-carrying gaseous stream in a partial oxidation ~~zone (3) or~~ chamber, under operating conditions in the following ranges:

(i) dwell time in the chamber of between 100 and 1200 milliseconds,

(ii) output temperature of the chamber of between 1150 and 1650°C,

(iii) pressure of the chamber of between 0.1 and 1.5 MPa,

and so that the output temperature of the chamber is adequate to convert at least 90% of the carbon of the feedstock into CO or CO2 and that the amount of soot contained in the effluent is less than 0.1% by weight relative to the feedstock,

e) cooling the effluent of the chamber ~~is cooled (5)~~ to a temperature of between 200°C and 1050°C,

f) circulating the cooled effluent in at least one zone for recovery of hydrogen and treatment of soot, said zone comprising a first circuit (6) comprising at least a first filter (7) and a second circuit (41) mounted in parallel; depositing soot in the first filter; regenerating the first filter containing the soot in the presence of a gas that contains oxygen, and concurrently circulating the cooled effluent in the second circuit, said first filter having a filtration surface area/useful volume ratio between 80 and 5000 $m^{-1}$, and withdrawing a hydrogen-rich effluent from said at least one zone for recovery, and

g) feeding a fuel cell (10) with at least a portion of the withdrawn hydrogen-rich effluent from the recovery zone.

2. (Currently Amended) A process ~~Process~~ according to claim 1, wherein the second circuit contains at least one soot filter (14).

3. (Currently Amended) A process ~~Process~~ according to claim 2, wherein the filter of the second circuit contains a vapor reforming catalyst of the soot that is collected to gasify it while the first filter is regenerated.

4. (Currently Amended) A process ~~Process~~ according to claim 2, wherein the filter of the second circuit is regenerated in the presence of a gas that contains oxygen for at least a portion of a filtering cycle ~~the period of time of the filtration stage in~~ for the first filter.

5. (Previously Presented) A process according to claim 1, wherein regeneration effluents of the first filter are drawn off from the first circuit.

6. (Currently Amended) A process according to claim 1, wherein ~~the gaseous oxidant stream and/or~~ the hydrocarbon feedstock contains water vapor in an H2O/hydrocarbon mass ratio of between 0.1 and 2.0.

7. (Currently Amended) A process according to claim 1, further comprising measuring[[,]] the oxygen content of the effluent that exits the recovery zone.

8. (Previously Presented) A process according to claim 1, further comprising conducting at least one at least partial elimination stage of the hydrogen sulfide and carbon monoxide of the effluent that is obtained from the recovery zone.

9. (Previously Presented) A process according to claim 1, wherein the fuel cell is an electrolyte-type cell with solid oxide (SOFC).

10. (Previously Presented) A process according to claim 1, wherein the fuel cell is a polymer electrolyte cell (PEMFC type) or a phosphoric acid cell.

11. (Currently Amended) A process according to claim 1, further comprising adjusting the operating conditions of the partial oxidation chamber ~~zone~~ during the regeneration periods of the first filter to reduce the amount of soot produced during said periods and circulating in the second circuit.

12. (Currently Amended) A device producing ~~for the production of~~ electricity by the process according to claim 1, comprising in combination:

a circuit (1) for feeding an air-rich oxidant stream that is connected to at least one heat exchanger (5) for the reheating of said stream,

at least one partial oxidation chamber that is connected to heat exchanger (5) and to a feed stream (2) of a hydrocarbon-rich stream for the partial oxidation of hydrocarbons for the reheated oxidant stream at an adequate temperature for obtaining a conversion of the hydrocarbons that is higher than 90% and the formation of soot in an amount that is less than 0.1% by weight relative to the hydrocarbons,

partial oxidation chamber (3) that is connected downstream to the exchanger for passing the effluent from the chamber through the exchanger,

soot recovery and treatment means that have an inlet connected to heat exchanger (5) and that comprise a first circuit (6) that comprises at least a first filter (7) and a second circuit (41) that are mounted in parallel, wherein ~~whereby~~ the first filter also comprises regeneration means (20, 21) that are sequential by soot combustion, wherein ~~whereby~~ the first filter has a filtration surface area/useful volume ratio of between 80 and 5000 $m^{-1}$, and wherein ~~whereby~~ the recovery and treatment means have an outlet (9) for effluents from which soot has been removed and that are rich in hydrogen,

at least one fuel cell that is connected to the outlet of the effluents of the recovery and treatment means, suitable for producing electricity,

means for alternating use of soot recovery and treatment means (30, 31, 32, 35) that are connected to regeneration means of first filter (20, 21).

13. (Currently Amended) A device ~~Device~~ according to claim 12, wherein means (30) for alternating use comprise means (33, 34) for modification of the operating conditions of the partial oxidation chamber during regeneration periods of the first filter for the

reduction of the amounts of soot produced during these periods and that circulate in the second circuit.

14. (Previously Presented) A device according to claim 12, wherein the second circuit comprises a soot filter.

15. (Currently Amended) A device according to claim 12, further comprising[[,]] means (50, 51, 52, 53) for clean-up of effluents inserted between the outlet of the soot recovery and treatment means and fuel cell (10).

16. (Previously Presented) A process according to claim 1, wherein the operating pressure of the chamber is between 0.15 and 0.8 MPa, the amount of soot in the effluent is between 0.5 and 100 ppm, and the effluent is cooled to between 500 and 900°C.

17. (Previously Presented) A process according to claim 6, wherein the $H_2O$/hydrocarbon mass ratio is between 0.4 and 1.2.

18. (Currently Amended) A device ~~Apparatus~~ according to claim 12, wherein the first filter has a filtration surface area/useful volume ratio of between 150 and $1500^{m-1}$.

Please add the following new claims:

--19. (New) A process according to claim 1, wherein the gaseous oxidant contains water vapor.

20. (New) A process for the production of electricity in a fuel cell, comprising:

passing a cooled effluent in a first circuit comprising at least one filter for depositing soot in the filter wherein the filter is regenerated when concurrently passing the cooled effluent in a second circuit.--